

AUTOMATED PAYMENT SYSTEM AND METHOD

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FIELD OF THE INVENTION

The present invention relates to systems and methods for collecting payments using an automated draft printing system operated by a payment collector.

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BACKGROUND OF THE INVENTION

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The effective operation of the modern economy depends on the ready availability of payment mechanisms by which funds can be transferred between parties. A number of mechanisms have been available for use both at the point of sale and for collection of debts relating to earlier sales. At the point of sale, the most popular payment mechanisms in recent times have been cash, personal checks, and bank-issued credit cards, including MasterCard (TM), VISA (TM), Discover (TM), and American Express (TM). Other methods of payment include store-issued credit accounts, bank account debit cards, Cash-on-Delivery (COD), and contracted payment plans in which the customer

agrees to pay for goods or services according to a predetermined schedule.

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Cash in advance is the only one of these methods that is not subject to a later non-payment or revocation which would prevent the merchant from collecting the amount due. Personal checks may be returned for insufficient funds and are subject to stop payment orders by the maker. Credit card sales are subject to federal laws which permit non-payment or at least a considerable delay of payment if the customer indicates dissatisfaction with the quality of goods or services rendered. The issuers of credit cards, credit accounts, and payment plans run the risk that the credit bill, even if not disputed, will not be paid according to the credit agreement. Debit card sales are subject to federal electronic funds transfer regulations which make it possible under some circumstances to later disallow a transaction. Cash-on-delivery transactions may be rejected by the purchaser at the time of delivery, leaving the seller to absorb the cost of the failed delivery. While some refusals of payment are the result of a legitimate dispute between the buyer and seller, many of these cases are a breach of the customer's duty to pay. Losses from bad debts must be absorbed by the merchant and passed along to future customers. Thus, most merchants might prefer to collect from their customers in cash.

However, the risk of loss inherent in carrying large amounts of cash discourages many people from carrying cash and using it to pay for more expensive goods and services. Also, when goods or services are to be delivered at a later

time, customers do not wish to pay in advance and thereby assume the risk of default or bankruptcy of the seller before the goods or services are delivered. Finally, in many cases the customer does not have the funds to make the purchase, and needs to finance the purchase by borrowing. For these reasons and others, these alternative payment mechanisms have collectively become much more popular than paying cash in advance and merchants necessarily offer alternative payment methods.

Various systems have been developed to reduce the risk to merchants in accepting checks or other non-cash instruments. For example, U.S. Patent 5,053,607 to Carlson et al. shows a point-of-sale system for verifying availability of funds so the merchant can determine whether to accept a check. Of course, such systems do not guard against a subsequent stop payment order being issued by the customer.

The popularity of these "promises to pay" has also resulted in the growth of an entire collection industry devoted to finally collecting debts represented by checks, credit accounts, and payment agreements in cases where the debts have not been timely paid.

When a debt goes unpaid, a merchant or credit issuer may hire a collection agency to seek recovery of the debt. The collection agency generally contacts the debtor repeatedly by phone and/or mail in an attempt to obtain payment. Generally, the collection agencies try to persuade the debtor to mail a check to the collection agency in payment of the debt. Of course, debtors often put off payment with the oft-used line "the

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check is in the mail." Even if a check is received, it is subject to dishonor as noted above. Collection agencies may also accept credit cards, but many debtors do not have credit cards or do not have sufficient credit to pay the amount due using a credit card. Also, a wire service is offered by Western Union (TM), for example, which allows persons to pay by cash or check at a remote location and have the funds transferred to the collection agency, for a substantial fee. This system requires that the debtor physically go to a wire transfer office to pay, and is less desirable and effective for that reason.

Because of the substantial manual effort involved in repeatedly contacting a debtor, collection agencies are often paid in the form of a substantial percentage of the amounts collected. Again, this represents a loss to the merchant which must be recovered through increased prices to future customers.

As noted above, one particular type of debt that often causes collection problems is an agreement to make scheduled payments. A variety of goods and services, such as automobiles, homes, major dry goods, and health club memberships, are often purchased on payment plans. Because of the repeated nature of the payments, it is possible that even the most diligent payor may, at some point, forget to mail a payment or send it late. Also, while the mail system in developed countries such as the United States achieves a very high delivery rate, it is statistically inevitable that some mailed payments will not be delivered.

One solution to the problems of reliably collecting repeated payments is a pre-authorized

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5 electronic debit. Many large and well-connected creditors, such as banks and the finance arms of automobile manufacturers, generate monthly tapes of authorized payments which are then processed electronically within the banking system. Funds are withdrawn from the checking account of the consumer and transferred directly to the creditor.

10 This service has recently been made available to smaller accounts with a substantial per-transaction charge. However, this electronic banking system is primarily adapted for processing pre-authorized transfers on particular predetermined dates, and deposits therefore cannot be processed entirely at the convenience of the parties. A connection with a bank is needed, which either involves obtaining and maintaining a direct connection or the use of a transaction processing company. Also, such electronic funds transfers cannot be authorized by telephone; a written authorization is legally required, so that immediate authorized collection of a debt cannot be accomplished by this method.

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Other automated payment systems have been developed, but do not achieve the advantages of the present invention. U.S. Patent 5,121,945 to Thomson et al. shows a system for generating regular checks, such as for the payment of utility bills, on customer accounts using a laser printer with a magnetic toner cartridge. Using stored account information, an authorized check to the payee is generated by the central system and transmitted to the payor for approval, signing, and return. While this system may be advantageous for the limited purpose disclosed, it does not

provide a system in which transfers are authorized by telephone and executed without mail delays.

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U.S. Patent 4,823,264 to Deming shows a system in which a customer can electronically pay bills using a computer. The customer's computer transmits an order to pay a bill to a central location, and a paper draft is generated for transmission to the payee. Funds availability may be verified before generation of the draft. This system requires that the debtor have particular computer equipment, and would therefore be ineffective in generalized debt collection situations.

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U.S. Patent 4,960,981 to Benton et al. discloses a method and system for transferring funds in which the customer's signed order to pay is transmitted to the bank by fax. The bank's fax receiver is equipped with character recognition equipment which takes the necessary information from the order, after which the system verifies funds availability and makes the payment requested if the funds are available. This system can only be used in cases where the bank involved has the required special equipment and the customer is present to sign the payment instructions.

Therefore, the inventor believes there is a need for an improved system and method for collection of debts which can be used for immediately debiting a debtor's bank account when the debtor authorizes this collection method by telephone.

SUMMARY OF THE INVENTION

Therefore, it is a general object of the present invention to provide a method for collecting funds from a customer's checking account when authorized, without requiring that an executed check be mailed to the payee.

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It is a further general object of the present invention to provide a system which facilitates authorized generation of a payment order for transfer of funds from a customer's checking account.

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Another object of the present invention is to provide a system for generating authorized drafts on a plurality of financial accounts belonging to a plurality of payors.

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A further object of the present invention is to provide a system for generated authorized drafts which receives input information sufficient to generate a draft, and which processes the information to produce a draft to be executed by an authorized agent for the payor.

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Another object of the present invention is to provide a stand-alone system for producing drafts on a plurality of accounts, wherein the system includes a laser printer using an MICR toner cartridge.

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A further object of the present invention is to provide system for producing drafts on a plurality of accounts belonging to a plurality of persons which receives input information and verifies the information to prevent generation of nonnegotiable drafts.

Yet another object of the present invention is to provide a system for automatically producing drafts which verifies input bank routing code information by comparing the information to a database of bank identification information.

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A further object of the present invention is to provide a system for automatically producing drafts which verifies the probable validity of an account number identifying a financial account.

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Another object of the present invention is to provide a draft producing payment system that identifies high risk drafts and provides an increased level of verification for such drafts.

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A further object of the present invention is to provide a scheduling system for automatically scheduling the future production of drafts, including a predetermined limited sequence of drafts or a series of periodic drafts.

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Still another object of the present invention is to provide a system which automatically generates authorized drafts and which further automatically generates a verification notice to the person authorizing the drafts.

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Another object of the present invention is to provide a geographically dispersed system for processing drafts in which a plurality of data collection stations are connected to a central draft production system which generates the drafts.

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Another object of the present invention is to provide a draft production system which has security measures associated with it to reduce the likelihood of production of unauthorized drafts.

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A more particular object of the present invention is to provide a draft production system

which is designed to produce drafts payable only to a predetermined party, such that the name of the party cannot be readily changed by a user of the system.

5 Another object of the present invention is to provide a process for receiving payments in which an automated draft production system is provided to produce authorized drafts on the account of a payor, executable by a person other than the payor.

10 It is also an object of the present invention to provide a process for collecting a payment in which a payor authorizes withdrawal of funds from the payor's checking account, for example by telephone, a draft is generated using an automated draft production system, negotiability of the draft is verified, the draft is executed on behalf of the payor, and deposited to the account of the payment collector.

15 Still another object of the present invention is to provide a process for collecting payments in which a payor authorizes withdrawal of funds from the payor's checking account, for example by telephone, a draft is generated using an automated draft production system, the draft is executed on behalf of the payor, and deposited to the account of the payment collector, in which the authorizations are received at a plurality of geographically dispersed locations and transmitted to a central service location for generation of the drafts.

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35 Other objects of the present invention will be apparent to those skilled in the art upon review of the specification, drawings, and claims of the present invention.

These objects and others are achieved according to the present invention by providing a system and method of collecting debts in which an automated processing system generates a draft, payable to the creditor and drawn on the debtor's checking account, pursuant to the debtor's authorization. The draft is then executed by the debt collector as authorized signatory for the debtor, and deposited into the creditor's account.

The automated system used to generate the drafts in the preferred embodiment has a simple input screen which receives the necessary information for generation of the draft, which in the preferred scenario is read to the system operator over the telephone by the debtor who has authorized the payment. The system then immediately verifies the bank and account information by comparing the input information to the data in a bank information database associated with the system. This verification process ensures that any errors in transmission of the account identification information can be rectified during the conversation with the debtor. Optionally, after verifying the account information, the system may generate an inquiry to the bank to determine the availability of funds in the debtor's account. When all verification is complete, the system generates a paper bank draft payable to the creditor, using MICR ink so that the draft can be processed in the banking system like an ordinary check. The signature block of the draft is made for the collection agent "as authorized signatory for" the debtor. In this manner, it is possible to obtain authorization for payment of a debt in a telephone conversation with

the debtor and to immediately deposit the debtor's authorized draft to begin the payment process, without depending on the debtor and the mail system to deliver a signed payment order to the creditor's collection agent.

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This system and method is particularly advantageous in automating the processing of debts by collection agencies, and as a payment alternative to credit cards and COD deliveries for goods and services ordered by telephone. Finally, this system and method can be used advantageously for regular payment generation by businesses whose pre-authorized payments are not regular enough to justify regular mass electronic funds transfers.

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BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a diagram of the hardware used in a preferred embodiment of the present invention to generate drafts on a customer bank account;

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Figure 2 is a flow chart showing a preferred embodiment of the automated collection method according to the present invention;

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Figure 3 is a representation of the main menu display in the preferred embodiment of the invention;

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Figure 4 is a representation of the main data entry screen according to the preferred embodiment of the invention;

Figure 5 is a representation of the screen display when postdated draft instructions are entered in the system;

Figure 6 is a representation of the screen display showing an error message indicating an invalid bank identification number;

Figure 7 is a diagram of the screen display showing a zip code error message;

5 Figure 8 is a diagram of an additional preferred embodiment of the present invention in which computer systems are provided at a plurality of locations to collect and verify draft data and the data is then transmitted to a central service bureau for production of the drafts;

10 Figure 9 is a block schematic diagram of the software structure in a preferred embodiment of the present invention; and

15 Figure 10 is a sample draft generated according to a preferred embodiment of the present invention.

15 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

20 In general, as described above, the present invention provides a system and method of collecting payments in which an automated system generates a draft, payable to the payee and drawn on the payor's checking account, pursuant to the payor's authorization. The draft is then executed by the payee's collector as authorized signatory for the payor, and deposited into the payee's account. The automated system used to generate the drafts in the preferred embodiment has a simple input screen which receives the necessary information for generation of the draft, which in a typical scenario will be read to the system operator over the telephone by the payor who is authorizing the transfer. The system then immediately verifies the bank and account information by comparing the input information to the data in a bank information database associated

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with the system. This verification process ensures that any errors in transmission of the account identification information can be rectified during the conversation with the payor. 5 Optionally, after verifying the account information, the system may generate an inquiry to the bank to determine the availability of funds in the payor's account. When all verification is complete, the system generates a paper bank draft 10 payable to the creditor, using MICR ink so that the draft can be processed in the banking system like an ordinary check. The signature block of the draft is made for the collection agent "as 15 authorized signatory for" the payor. In this manner, it is possible to obtain authorization for payment of a debt in a telephone conversation with the payor and to immediately deposit the payor's authorized draft to begin the payment process, without depending on the payor and the mail system 20 to deliver a signed payment order to the payee's collection agent.

Referring first to Figure 1, the present invention is implemented, in a first preferred embodiment, using a localized computer system 100 comprising a personal computer 102 and a display screen 104, keyboard 106, and printer 108 connected to personal computer 102. Printer 108 is preferably a laser page printer such as any of the printers sold under the trademark Laserjet 25 (TM) by the Hewlett-Packard company. Printer 108 operates using a toner cartridge 110 installed in printer 108, and the toner cartridge is of the type which prints with magnetically charged ink 30 which can be read by Magnetic Ink Character Recognition (MICR) equipment used by the banking 35

5 system's automated check clearing centers. These
MICR toner cartridges can be obtained from a
number of sources, for example LaserScript
division of Matrix Technology, Inc., 7129 Banjo
Ct., Columbia, MD 21045; or MICR Tech Group, Inc.,
P.O. Box 152, Brownstown, IN 47220. The cartridge
used should be one selected for compatibility with
the brand and model of printer 108 being used.
10 Personal computer 102 may be an IBM (TM)
compatible personal computer incorporating an
INTEL 80X86 (TM) microprocessor and running the
Microsoft MS-DOS (TM) operating system or another
of the various operating systems adapted to work
on this class of computer. Of course, those
15 skilled in the art will appreciate that the system
can also be implemented on a variety of personal
computers, minicomputers, or mainframe computers,
using a variety of printers, and the invention is
not limited to the particular hardware disclosed
in this preferred embodiment.

20 The system 100 can be operated with a single
input workstation as shown or multiple input
workstations can be provided. If multiple input
workstations are used, the software in the system
will be designed for multiuser access. For
25 example, record locking protocols may be
implemented.

30 The computer 102 is optionally provided with
a fax modem 112 which can be installed internally
in computer 102 and is connected to an outgoing
telephone line (not shown). Fax modem 112 may be
a JT FAX Board made by Hayes Microcomputer
Products, Inc. of Atlanta, Georgia. Fax modem 112
permits software operating in computer 102 to
35 electronically generate fax images and to

5 subsequently dial a remote fax machine and transmit the image to the remote machine. As will be explained in more detail later, this fax modem may be used in the preferred embodiment of the present invention to generate and deliver a letter of inquiry to the debtor's bank to determine whether the debtor's account is in good standing and has sufficient funds to make payment on an authorized draft.

10 The system disclosed herein can be advantageously used as part of a debt collection process in which the debtor is contacted by a collection agent over the telephone and, if willing to pay, is asked to authorize generation and presentation of a draft on the debtor's checking account. The debtor's name, address, telephone number, description of the debt, and the amount are typically already known to a collection agent. In the case of use of this system for mail or telephone orders of goods and services, this information will be obtained by the person receiving the order and entered in the system. The remaining input information describing the desired draft transaction, particularly the ABA number, account number, and next check number, is obtained from the debtor, usually by having the debtor read off the numbers on the bottom of one of debtor's checks. The next check number in debtor's check sequence is obtained and the debtor is instructed to destroy the existing check bearing that number. After processing by the check clearing house system, the draft generated will appear in the debtor's bank account statements as a numbered check and the paid draft will be returned to debtor with his or her other
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checks depending on the policy of debtor's financial institution.

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For convenience, the person operating the system will generally be referred to herein as a "collection agent" and the payor will be referred to as the "debtor." However, it should be recognized that the present system and method can be used not only to collect preexisting debts, but as a payment mechanism for telephone or other sales. In this case, the person authorizing the draft will be a customer and the system operator will be an order processor. Also, for convenience the financial institution holding the debtor's account will generally be referred to as a bank, but it should be understood that this financial institution may be a savings and loan, credit union, brokerage firm, investment firm, or money market account issuer, or any other institution public or private upon which the debtor may lawfully issue an instruction to pay funds to a designated party.

The software program operating on computer 102 is preferably menu driven. Figure 3 shows a preferred main menu for the software program. As can be seen by reference to Figure 3, the functions of the software accessible from the main menu preferably include entering new draft production (check) information; entering information for production of a series of drafts on the same account; editing drafts currently scheduled for production and deposit; editing drafts scheduled for future production and deposit; viewing or deleting the draft information recorded in the system; viewing records (archival information) of past drafts produced by the

system; printing drafts; performing system utility functions; and ending execution of the program.

The system utilities selection on the main menu preferably produces display of a utility menu which provides a number of system management functions. For example, these functions preferably include re-indexing of databases associated with the system, data backup functions, security functions such as changing authorized passwords for system operation, updates to databases such as the zip code database and the ABA database, system configuration functions such as selecting the port to which the printer is connected, the type of printer, etc.; setup of the facsimile verification functions, purging stored records such as records of archived checks, and other desired system management functions.

The software preferably operates generally according to the flow chart of Figure 2. As shown in Figure 2, in block 202 the necessary information to specify the draft is entered in the computer 102 as part of an information entry process, preferably during the course of the above-described telephone conversation with the debtor. Specifically, in block 202 transaction information is input into the computer 102 (shown in Figure 1). This transaction information is preferably input using the keyboard 106 (shown in Figure 1). In performing the step of block 202, screen 104 (shown in Figure 1) will preferably display a data entry screen such as that shown in Figure 4. As can be seen in Figure 4, the transaction information preferably includes the name and address of the debtor, the next check number in sequence for the debtor's account, the

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date of the draft, the amount of the draft, a memo entry describing the debt, an American Banking Association (ABA) bank identification number specifying the bank or other financial institution holding the debtor's checking account, and the number of the debtor's checking account.

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The information entry process in block 202 may also include the scheduling of future payments for which drafts are to be generated by the system. Figure 5 shows a screen display which permits entering of future payments to be generated. Preferably, there are several modes for entry of future payments. In a first mode, payments of the same amount are scheduled regularly at predetermined intervals in the future, and generation of drafts will continue at the defined intervals until the system is instructed to discontinue the payments. In a second mode, one or more payments of varying amounts may be scheduled for defined dates in the future. These features are particularly useful in several situations which may be encountered by the system operator.

As a first example, when contacted regarding overdue debts, debtors frequently indicate a desire to pay at a future date when funds are expected to be available. For example, the debtor may offer to pay \$50 of a \$120 debt on the next Friday when the debtor will receive a paycheck, and may agree to pay the remaining \$70 due two weeks later, upon receipt of his or her next paycheck. Since the system permits the scheduling of a plurality of future drafts at any desired dates, and with varying amounts, the system

readily accommodates such debtor-creditor arrangements.

As a second example, the system can be used as a payment system for a sale which requires periodic payments, e.g. a health club membership for which monthly dues are paid. In this case, the purchaser may agree that a draft for a defined amount, for example \$19.95 a month, will be automatically submitted on an agreed day each month in payment of dues. The system will be programmed to automatically generate this draft each month until different instructions are received. For example, if the customer wishes to discontinue the membership, the system operator would instruct the system to cease regular production of drafts on the customer's account.

As a third example, the system can be used to generate regular periodic payments of different amounts. For example, a customer of a service using this system might authorize automatic payment of monthly utility bills by the service. The payments in this case would be periodic, but the system would require entry of a varying amount for each draft to be generated. For such uses, the customer might advantageously provide a general authorization to generate periodic drafts in the amount owed each period, and this information might be automatically transferred from a billing records system to the system of the present invention to initiate generation of the drafts in the proper amount. It may frequently be desirable to interface the system of the present invention with billing, accounting, or other programs used by the payee. For example, such an interface can be accomplished by transferring

batch processing or information files between the present system and the billing or accounting programs by writing the files to a mass storage device or through an interface program such as Microsoft Windows (TM).

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The information entered to define future (postdated) drafts will be stored for future use as described further below with respect to block 212 of the flow chart.

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As the information is entered in block 202, or immediately after entry is completed, the information given is preferably verified against appropriate databases and checking algorithms associated with the computer 102, as shown in blocks 204, 206, and 208. In block 210, any warning messages determined by the verification process will be displayed to the operator. It should be noted that the display of these warning messages is shown in a single flow chart block for convenience, and the verification functions can be performed, and the warning messages displayed, immediately after data entry has been entirely completed. However, it may also be desirable to have each data verification function performed during the information entry process, as the relevant data item is entered, and to immediately display a warning message if the item just entered is erroneous.

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In conjunction with the software which performs the verification function, the databases and algorithms provided are a verification means for immediately checking the validity of the data entry.

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As a first step in the verification process, the ABA number entered to identify debtor's

5 financial institution is validated by comparison
with the entries in a financial institution
database having a record of each authorized ABA
number, as shown in block 204 of Figure 2. This
financial institution database is preferably
constructed from records which each describe a
10 financial institution, and include the financial
institution's ABA number, name, address, telephone
number, and fax number. If the ABA number is
found in the database, the software program
displays the financial institution name and
address on the screen of Figure 4 so that the
collection agent can verify the correctness of
15 this information with the debtor. If no matching
ABA number is found, a warning message will be
provided to the collection agent operating the
system according to the function of block 210 and
as illustrated in Figure 6. This message
indicates that the ABA number is believed to be
20 invalid. Although the system preferably provides
a method for overriding this error detection and
using the suspect bank identification number,
generally the collection agent will ask the debtor
to re-read the bank identification information on
25 the bottom of debtor's check so that a corrected
financial institution identification number can be
entered.

In this way, the present invention provides
particular advantages in the context of a process
30 for quickly generating one-time payment
transactions. This verification process provides
an opportunity to verify the accuracy of essential
transaction processing information at a time when
the debtor is still on the line and can provide
35 corrected information if necessary. In this way,

5 r turned drafts and associated fees assessed by
the creditor's financial institution can be
avoided. This verification process can be
achieved using a local computer system without any
direct hookup to electronic banking information
networks.

10 Referring again to Figure 2, a further
verification step may be performed on the account
number as shown in block 206. Many financial
institutions limit the account numbers used to
numbers which meet the requirements of a
particular predetermined algorithm, e.g. all
account numbers may be divisible by a
predetermined number or the sum of the digits may
have a predetermined characteristic. If the
financial institution database associated with
computer 102 is provided with information defining
such account number verification algorithms for
the financial institution involved, the validity
of the account number can be verified and an
immediate warning issued to the collection agent
if an invalid account number is suspected.

15 Further verification functions may be
performed upon operator entry of the debtor's zip
code as shown in block 208 of Figure 2. In one
embodiment, a database associating all valid zip
codes with their associated city and state names
may be associated with computer 102, and the entry
of the zip code may result either in the display
of debtor's city and state for verification with
the debtor, or may result in an error message
indicating that the zip code appears to be
incorrect, as shown in Figure 7.

20 Referring again to Figure 2, in another
preferred embodiment, the zip code database may

include empirical or statistical information on
the prevalence of check fraud originating in that
zip code. This information will be particularly
useful in cases where the present system is used
5 as a payment mechanism for mail or telephone
orders. If the debtor's zip code is one which has
experienced a high proportion of check fraud or
bad checks, an indication can be generated to the
system operator, and additional verification
procedures can be implemented. Additional
10 information could be requested from the debtor, or
the collection agent might take steps to insulate
against nonpayment of the draft, such as verifying
funds availability directly with the debtor's
financial institution or obtaining a check
guarantee from a firm specializing in such
transactions. To achieve more precision than can
be obtained merely from a zip code check, a
database of overdrawn account numbers and names
20 and addresses of bad check passers may also be
provided, and a match with an entry in this
database could similarly be used to produce a
warning to the collection agent to take protective
action, such as one or more of the techniques
25 suggested above.

Following completion of the verification
functions, as shown in block 210 in Figure 2, the
system will display any appropriate messages to
the operator indicating possible errors in data
entry or in the information received from the
payor. In the flow chart, this function is shown
30 in a single block after the verification steps,
but it may be even more preferable to display
appropriate messages immediately following each
verification step to provide feedback to the
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operator as soon as an incorrect entry has occurred. The display of error indications could also occur at a time after data entry, for example, as part of an exceptions report for a large batch of drafts being printed.

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In the next step, as shown in block 212, transaction information defining the draft to be produced may be stored in the computer 102, preferably in a mass storage device associated therewith. The information defining each draft printed is preferably permanently archived for future reference in case of any question or dispute.

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As noted above, it is also possible to schedule future payments using the system according to the present invention. For example, the system may be programmed to generate postdated drafts or a series of regular periodic drafts. These postdated drafts can be printed immediately and held for deposit by the operator until their effective date, or data defining the postdated drafts can be stored in the storage step of block 212 and the program can operate to schedule production of postdated drafts and activate the printer to print the drafts on the date the drafts are desired.

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Once data defining postdated drafts is stored, the drafts can be viewed and edited in any desired manner, or even deleted, prior to their actual generation, as noted previously in the description of the main menu functions. For example, if a series of drafts has been scheduled and the payor changes banks or account numbers, the corrected information for the draft can be entered at a later date through the editing

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function before the drafts are generated. As another example, an authorization of a series of drafts can be deleted using the delete function on the main menu.

5 As part of the function of printing drafts and scheduling drafts in advance, the software will preferably automatically generate a standard form written notice letter to the payor listing the amount and date of the drafts which will be presented for payment. The written notice may include a form part including language authorizing the transaction and designed to be signed and returned to the payment collector to provide a written authorization for making a draft or drafts on the payor's account. This notice can be printed on the printer 108 or, preferably on another printer (not shown) associated with the system which is loaded with paper appropriate for correspondence.

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20 Referring again to Figure 2, the system may automatically take action in block 214 to verify the availability of funds in the payor's account. This verification operation is particularly important in the case of one-time transactions, for which the present system and method are particularly applicable. The payor may be a person with a questionable credit record, in cases where the system is used by a collection agency, or the payor may be a new customer and have an indeterminate record in cases where the system is used for telephone order taking, such as in response to television advertising or mail order catalogs.

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35 The funds verification process executed by the system may take any desired form, but two

forms in particular are preferred in the present invention. In the first preferred embodiment, a fax letter is automatically generated and transmitted to the payor's financial institution, identifying the payor and the account number, indicating the amount of the transaction authorized, and requesting that the financial institution immediately contact the system operator (preferably at a toll-free number or by a collect call) if sufficient funds are not available or the payor's account is not open and in good standing. The fax letter may be based on a standardized form letter, and the payor, account, amount, and bank identification information are then inserted in the form letter automatically by the program from the draft production data whenever this fax verification feature is enabled by the operator or by programming of the system. The bank's fax number may be obtained from the financial institution database associated with the system, and the program uses the fax modem 112 (shown in Figure 1) to automatically transmit the fax letter to the bank. Thus, the generation and transmission of this fax letter is entirely electronic and automatic and does not require any intervention from the operator. The timing of the transmission of the fax letter can also be controlled by the operator through a screen entry or by the system through predetermined criteria. For example, it may be desirable to store a record of facsimiles to be transmitted and to then transmit these faxes during evening, nighttime or weekend hours when lower telephone rates are in effect.

In a second embodiment of the funds verification function of block 214, the system may be selectively connected using fax modem 112 (shown in Figure 1) to one of the central clearing houses or databases capable of providing on-line check authorization or check guarantees. In this embodiment, the software of the present invention would automatically connect to the check verification service and transmit appropriate draft information as part of an inquiry to determine whether sufficient funds are available. The software may also compare the payor and/or account information to a "negative database" listing names and addresses, social security numbers, account numbers, or other identifying information of persons who have drawn bad checks. Any or all of these methods can be used. If insufficient funds are available or the account does not exist in good standing, the system may then automatically generate an indication to the operator.

These funds verification functions may be selectively enabled and disabled by the operator based on predetermined criteria, or may be automatically enabled and disabled by the system based on predetermined criteria, for example the lack of payment history with the particular customer or the use of a suspect zip code.

When a draft is to be produced, either because the system is operated in an immediate production mode or because production of current "postdated" drafts has been requested by the operator, the software operates to format the drafts as shown in block 216 of Figure 2. The formatting of the draft is accomplished according

5 to a predetermined draft design programmed into
the system. The system determines the locations
for printing of data on the draft, and the size
and fonts to be used for each data item. A sample
10 draft is shown in Figure 10 indicated by the
reference number 1000. The draft includes the
15 payor's name and address 1002, the date and the
payor's sequential check number, payee designation
20 1004, financial institution identification 1006,
the amount 1008, a memo line 1010, automated
clearing house information 1012, and signature
25 block 1014. The payee designation 1004 is
preferably hard coded into the system and cannot
readily be changed. Similarly, the signature
block 1014 is predetermined and cannot be changed
by the operator.

As another option, a plurality of
predetermined payees and signature blocks may be
coded into the system, and the system may be
programmed to selectively switch between the
payees for production of different drafts. This
feature accommodates the use of a single system to
make collections for several companies. What is
important is that the payees of the system be
limited to predetermined payees so that a
dishonest person gaining access to the system
cannot generate unauthorized drafts payable to
that person or to some entity controlled by that
person.

30 The automated clearing house information 1012
is printed in a machine-readable font compatible
with automated check clearing systems, according
to standards promulgated by the American Banking
Association. This automated clearing house
35 information 1012 includes the financial

institution's identification number, the account number, the check number, and may also include the amount. Each field is separated by designated field identification characters, according to the appropriate ABA check printing standards.

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Preferably, the system operates to place the check number in varying locations within the automated clearing house information depending on the practice of the financial institution involved. For example, personal checks drawn on banks usually have the check number at the end of the data line. Business accounts usually have the check number in front of the bank routing number, and credit unions usually place the check number between the routing number and the account number information. In one embodiment, the placement of the check number is determined by an operator input. In another embodiment, information defining the placement of the check number can be included in the bank information database associated with the system and the proper placement of check numbers can be determined automatically by the system through reference to the database.

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The signature block 1014 of draft 1000 is generated for a signature other than the signatures under which the bank is normally authorized to pay drafts, i.e. a signature other than the payor's. Preferably, the signature block is prepared for the payee or an agent, acting "as authorized signatory for" the payor. In this case, the payee or an agent of the parties would execute the draft on behalf of the payee. Alternatively, the system could be programmed to print marks legally effective as a "signature" on

the draft, eliminating the need for any manual signing.

This formatting of the draft may be accomplished immediately following input of the draft defining information, or more preferably the draft information may be permanently archived and/or temporarily stored in a more compact form. Formatting, in terms of positioning of information and fonts, may then be performed immediately prior to printing of the draft.

The formatted data is then transmitted to the draft printer as shown in block 218 of Figure 2 to produce a draft output as shown in Figure 10. The draft is preferably printed on security paper of the type with a background pattern that makes the occurrence of erasures or other modifications apparent. As noted before, the entire draft, or at least the portion of the draft which will be read by automated character recognition equipment at automated check clearing houses, may be printed in ink which is compatible with these systems. Presently, an ink having a magnetic component is used in these systems, and this ink should be used when producing a draft to be automatically processed.

Security functions are particularly important in the present invention since there is a clear potential for misuse of this invention if the system is designed improperly and access to the system 100 is obtained by dishonest persons. However, the preferred embodiment has several features which prevent unauthorized persons from generating unauthorized drafts payable to themselves. First, the system is preferably provided with password protection so that access

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to the draft printing functions cannot be obtained by unauthorized persons. As a second level of defense, the software is preferably encoded so that each copy of the software will print only drafts payable to a predetermined payee. That is, the payee is hard-coded into the program and cannot be readily changed even by an authorized user of the system. Generally, the predetermined payee will be the company operating the system. Preferably, the coding of the payee into the program will not be in a sequential ASCII format which could be readily reviewed and changed by a person with even limited knowledge of computers. The payee information is preferably encoded using a code operator and/or scrambled and dispersed through the program file, so that modification of the payee would require decompiling and extensive study of the program. This feature removes the incentive for fraud by ensuring that any fraudulent drafts printed will be payable to the order of the company, rather than being payable to any individual operator.

The system of the present invention has heretofore been described in terms of a stand-alone system which receives data entry and prints drafts. However, further security advantages are obtained in another preferred embodiment, shown in Figure 8, in which the draft printing functions are performed in a central secure location. As shown in Figure 8, the computer 102 and associated screen 104 and keyboard 106 are placed in a first location 800. In this embodiment, it will be desirable to provide a plurality of computers 102 and associated components in dispersed locations 800. The computer 102 is connected through fax

modem 112 to a telephone line 801, which is a means for establishing a data transfer connection between computer 102 and a computer 802 in a location remote from location 800. Computer 802 is connected to printer 108 with magnetic ink cartridge 110, which prints drafts in response to data received from computer 102 over telephone line 801. The functions described previously for computer 102 with reference to Figure 2 can be divided between computers 102 and 802 in any desired manner. For example, only the data entry functions might be performed at computer 102 and the data transmitted to computer 802 for performance of all other functions. However, it has been found to be particularly advantageous to divide these functions so that the data entry and verification functions (blocks 202-210 of Figure 2) are performed in computer 102 at location 800 and the draft formatting and printing functions (blocks 216-218 of Figure 2) are performed in computer 802. The functions of storing future transactions and verifying funds availability (blocks 214-216 of Figure 2) can be performed in either location depending on staffing and the organization of the system users.

Variations on this embodiment are also possible. In particular, the data transfer connection means between computer 102 and computer 802 need not be a telephone line, but could be any data transfer system, including a local area network, packet switching system, cellular telephone, radio transmission system, satellite transmission system, infrared transmission system, diskett or other mass storage transfer, or other method of transferring data from one location to

another. Also, data verification functions might be performed at computer 102 and repeated by computer 802 before computer 802 prints the draft.

In another desirable embodiment, the central computer 802 may receive draft information in a batch file which can be transmitted by a communications link, by diskette, or other means of transferring data. The batch file will contain the information necessary to generate at least one and generally a large number of drafts. The central computer 802 will preferably verify the data for each draft in the batch file before printing the draft and will display or print out an exception report listing any drafts which could not be processed because of incorrect bank routing numbers or other criteria which were not met during the verification process. Preferably, the data is also verified at the time of original entry so that the operator can correct erroneous data before processing of the drafts. However, the verification process may take place at either or both times and locations within the scope of the present invention.

The timing of the transfer of data from computer 102 to computer 802 can be adjusted to achieve particular desired advantages depending on the use of the system. The data defining each draft can be transferred to the computer 802 immediately upon collection of the data, or the data for a draft can be stored and transmitted to computer 802 as part of a mass transmission of a group of drafts to be printed. As an example, the draft information could be transmitted, and drafts printed, at the end of the business day or at a

predetermined number of times during a business day.

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The software program according to the present invention can be designed according to a number of schemes, using a variety of languages and platforms as will be appreciated by those skilled in the art, and the invention is in no way limited to the embodiment of the software disclosed herein. In a preferred embodiment illustrated in the block diagram of Figure 9, the software design includes a front end processing program 902 which is a customized database program implemented in a standard database platform. One suitable platform is Clipper (TM) sold by Computer Associates of San Jose, California. Source code for a Clipper-based front end program 902 according to the present invention is provided in the software appendix. Generally, this program implements the software functions (see flow chart of Figure 2) by providing menu functions 903, including data entry functions, and an interface to the required verification data files 905. When drafts are to be printed, the main database program preferably passes control to a font/formatting program 904 which may be Page Garden (TM) software manufactured by Block Publishing, 800 S.W. 37th Ave., Suite 765, Coral Cables FL 33134, or any other appropriate font and formatting control platform. Generally, the font/formatting program 904 receives draft production data from the database program 902 in the form of an output file such as an ASCII formatted file. The font/formatting program 904 will then format and arrange the input data in an appropriate form for output as a formatted draft. In particular,

font/formatting program 904 will place the data items in the appropriate line and column on the draft, download appropriate fonts to an attached printer as required to print the draft, and produce commands to select these fonts during printing so that the various information items on the draft appear in an appropriate manner.

A particularly desirable function of the font/formatting program is the provision of a standard bank number font which is recognized by automated check processing equipment, and the printing of the ABA number, check number, account number, and optionally the amount, in the proper format at the bottom of the draft according to ABA standards for checks. As noted above, it will be preferably to connect the output of font/formatting program 904 to a printer that will print at least this bank processing information using magnetic ink, or other printing standards which may be developed to enhance automated check clearing house operations.

While the font/formatting functions may be most easily implemented using a platform designed for this general purpose such as the Page Garden program described above, these printing control functions could also be programmed into the database program 902 or a custom output formatting program could be used.

The main database program 902 is also connected to selectively initiate operation of fax control program 906. Fax control program 906 is preferably software provided as part of fax modem 112 (shown in Figures 1 and 8). Fax control program 906 preferably operates from a DOS command line interface and the main database program 902

is programmed to spawn a DOS shell and execute the desired functions. Fax control program 906 operates when activated to receive a data file defining a fax image and a destination telephone number, and then activates fax modem 112 (shown in Figures 1 and 8) to dial the desired telephone number and transmit the specified fax image. This functionality is used in transmitting a facsimile verification request to a financial institution as described previously. Specifically, after entry of the data defining a draft, fax verification may be indicated, either by selection of the operator or because certain criteria are met, such as the transaction originating in a particular area or the payor having either a nonexistent or poor payment history with the creditor.

When fax verification is indicated, database program 902 will access the record in data files 905 defining the financial institution which holds the debtor's account. Typically, this record will already be available to the database program 902 since this record is used to verify the bank identification numbers as described previously. The database program 902 will obtain the fax number of the financial institution from the data record and will pass this fax telephone number to fax control program 906. The database program 902 will also insert key data describing the debtor, the debtor's bank account number, and the amount of the proposed draft into a form letter file to create a letter image for fax transmission to the financial institution. This letter image file is then transmitted to the fax control program 906 and transmitted to the destination fax machine.

Thus, a system and method has been disclosed which quickly generates and processes authorized drafts on a debtor's account at a financial institution to effect payment of debts.

- 5 In its use as a tool for collection of debts, the present system provides a clear advantage over prior art systems in that payment can be drawn from the account of a debtor immediately upon a telephone authorization from the debtor. The system can be constructed at relatively little expense as a stand-alone system that is practical for use by small agencies and companies who normally do not have access to electronic funds transfer systems.
- 10 The system also provides significant advantages for businesses seeking an improved method of receiving payment for goods and services ordered by telephone. The system avoids the disadvantages of cash-on-delivery arrangements and eliminates the delay in completion of the transaction inherently required if the customer must mail a check to the seller to initiate shipment of the goods or performance of the services. Also, as a payment method, this system offers advantages similar to those found in the use of credit cards, but does not require that the purchaser have a credit card. Figures from the American Banker's Association show that only 80 million Americans have access to a credit card, but over 183 million have checking accounts. Therefore, the present system and method improves access to mail order goods and services for those who do not have a credit card. Finally, by generating the draft at the payee location rather than the payor location, the present system and
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method reduces postage costs and prevents lost mail by providing immediate delivery of the draft to the payee.